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Resolving Non-Performing Loans After Crises: A Review of Strategies, Evidence, And the Forbearance Debate

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ABSTRACT: Every major banking crisis leaves behind a stock of non-performing loans (NPLs), and how that stock is resolved shapes the speed and completeness of the subsequent recovery. This paper reviews the theory and cross-country evidence on NPL resolution strategies — write-offs and provisioning, loan restructuring, market sales, and transfers to asset management companies — and on their principal alternative, regulatory forbearance. The review synthesises evidence from the canonical historical episodes (Japan's lost decade, the Nordic crises, the Asian financial crisis, the European sovereign debt crisis, and the COVID-19 policy experiment) and from the firm- and bank-level literature on zombie lending. The weight of evidence supports early, transparent loss recognition paired with credible recapitalisation as the strategy most consistently associated with restored credit growth, while sustained forbearance is associated with capital misallocation, depressed competition, and prolonged stagnation. The review also identifies the conditions under which the consensus prescription is qualified: fiscal capacity constraints, the distinct dynamics of the COVID-19 moratoria, and the institutional prerequisites — insolvency regimes, distressed-debt markets, AMC governance — without which aggressive resolution fails in execution. The paper concludes with implications for crisis-preparedness frameworks and a research agenda on resolution in fiscally constrained emerging economies.

KEYWORDS: non-performing loans, banking crises, forbearance, zombie lending, asset management companies, bank recapitalisation, literature review

1. INTRODUCTION

Banking crises differ in their triggers but converge in their aftermath: a stock of nonperforming loans that sits on bank balance sheets, absorbing capital, management attention, and provisioning capacity. The policy question that follows every crisis is therefore the same — how quickly and by what mechanism to resolve the bad-loan overhang — and the answer chosen has repeatedly proved as consequential for recovery as the management of the crisis itself. Economies that resolved NPLs rapidly, such as the Nordic countries after their early-1990s crises, returned to credit growth within a few years; economies that deferred resolution, most famously Japan after 1990, experienced stagnation measured in decades (Hoshi & Kashyap, 2004; Laeven & Valencia, 2013).

The intervening thirty years have produced a substantial literature on why these trajectories diverge, centred on the economics of forbearance and zombie lending: the mechanisms by which unrecognised losses convert a banking-sector problem into an economy-wide misallocation of capital. They have also produced institutional innovation — asset management companies, asset quality reviews, NPL securitisation markets, calendar provisioning — and, in the COVID-19 pandemic, a deliberate policy experiment in temporary, system-wide forbearance whose outcome qualifies some earlier lessons. This paper reviews this body of theory, evidence, and institutional experience.

Section 2 sets out the analytical framework: why NPLs suppress credit and why banks under-resolve them voluntarily. Section 3 reviews the resolution toolkit. Section 4 synthesises the cross-country evidence from the major historical episodes. Section 5 examines the forbearance debate and its COVID-era refinement. Section 6 draws policy implications, and Section 7 concludes with a research agenda.

2. WHY NPLS SUPPRESS CREDIT — AND WHY BANKS DELAY

The transmission from NPL stocks to credit contraction operates through three channels. The capital channel: recognised losses deplete regulatory capital, and banks near minimum requirements restore ratios by shrinking risk-weighted assets — cutting lending — rather than by raising costly equity. The funding channel: opaque asset quality raises banks' own funding costs, as counterparties price the uncertainty. The management channel: workout activity consumes scarce organisational capacity that would otherwise originate new credit. Together these channels make a high-NPL banking system a persistent drag on the real economy independent of the original shock (Fell et al., 2017).

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Left to themselves, banks systematically under-resolve. Recognising a loss is irreversible and immediately reduces reported capital; carrying the loan at inflated value preserves the option that the borrower recovers — or that the recognition happens under a future management team. Where supervisors permit, this gamble-for-resurrection incentive produces evergreening: extending new credit to distressed borrowers so they can service old loans, keeping exposures technically performing. The private optimum is thus delay, while the social optimum — because of the credit-supply externalities above — is early recognition. This wedge is the fundamental case for supervisory intervention in NPL resolution, and its size depends on the credibility of supervision and the depth of the capital cushion.

3. THE RESOLUTION TOOLKIT

Four mechanisms dominate practice, and they are complements as much as alternatives. On-balance-sheet workout — restructuring terms with viable borrowers — preserves relationship value but is slow and capacity-intensive, and its integrity depends on distinguishing viable from non-viable borrowers, precisely the judgement evergreening corrupts. Write-offs and provisioning crystallise losses and clean the balance sheet, but consume capital and therefore presuppose either buffers or recapitalisation. Market sales to specialised investors transfer workout to entities with the capacity and incentives for it, but require a distressed-debt market with pricing dense enough to avoid fire-sale discounts — an infrastructure Europe built only gradually after 2014, and many emerging markets still lack. Transfers to asset management companies — bad banks — centralise workout, exploit economies of scale in servicing, and remove uncertainty from bank balance sheets at a stroke; their record ranges from the successful (Sweden's Securum, Spain's SAREB in qualified terms, Ireland's NAMA) to the cautionary, with the difference turning on transfer pricing discipline, governance independence, and sunset credibility (Fell et al., 2017; Claessens et al., 2001).

Two supervisory instruments condition the whole toolkit. Asset quality reviews establish the truth of balance sheets, converting private information into common knowledge and thereby unlocking both market transactions and credible recapitalisation; the ECB's 2014 comprehensive assessment is the canonical modern example. And calendar provisioning — mandatory provisioning schedules by vintage of default — converts the resolution decision from an option banks defer into an obligation they anticipate, attacking the delay incentive at its root.

4. CROSS-COUNTRY EVIDENCE

The historical record is unusually consistent for a macro-financial question. The Nordic crises of the early 1990s — resolved through rapid recognition, temporary nationalisation, bad-bank transfers, and swift reprivatisation — produced recoveries in which credit growth resumed within roughly three years. Japan's post-1990 experience, characterised by prolonged forbearance and delayed recapitalisation, generated the zombie-lending equilibrium documented by Caballero, Hoshi and Kashyap (2008): congested industries in which subsidised incumbent survivors depressed prices and profits, deterring entry and investment by healthy firms — converting a banking problem into two decades of misallocation. The Asian crisis economies present an intermediate panel: Korea's relatively aggressive KAMCO-led resolution against slower resolution elsewhere, with recovery speeds ordered accordingly (Claessens et al., 2001).

The European sovereign debt crisis provides the richest recent variation. Countries that combined asset quality reviews, recapitalisation, and NPL sale programmes — Ireland and Spain most prominently — saw NPL ratios and credit contraction reverse years earlier than countries where forbearance persisted; bank-level studies of the period document the zombie-credit mechanism operating within European banking, with undercapitalised banks continuing to lend to impaired borrowers while cutting credit to healthy ones (Acharya et al., 2019; Schivardi et al., 2022). Across episodes, the recurring finding is that recognition without recapitalisation produces credit contraction, and recapitalisation without recognition produces zombie lending; the successful cases are precisely those that did both together.

5. THE FORBEARANCE DEBATE, REFINED BY COVID-19

The pre-2020 literature reads as a broad indictment of forbearance, but the honest statement of the evidence is conditional: forbearance is damaging when it is opaque, open-ended, and a substitute for recapitalisation; it can be defensible when it is transparent, time-limited, and a bridge across an identifiably temporary shock. The COVID-19 pandemic tested exactly this distinction. Faced with a shock that was severe but plausibly transitory, authorities worldwide deployed deliberate, announced, timelimited forbearance — payment moratoria, guarantee schemes, provisioning flexibility — on a scale without precedent. The widely predicted NPL wave largely failed to materialise: corporate insolvencies fell below trend during the acute phase and normalised without a systemic spike thereafter, aided by fiscal support that addressed the borrowers rather than merely the banks.

The episode does not overturn the historical lesson; it sharpens it. COVID-era forbearance differed from the Japanese template in every relevant dimension: it was explicit rather than concealed, universal rather than selective (thus not a screen for evergreening), time-limited by design, and paired with fiscal transfers that restored borrower viability rather than merely deferring recognition of its absence. The refined proposition the combined evidence supports is that the damage historically attributed to forbearance is specifically the damage of concealed, selective, open-ended forbearance that substitutes for loss recognition — while transparent bridging of a temporary shock, with the fiscal state carrying borrower risk, is a different instrument that happens to share the name.

6. POLICY IMPLICATIONS

Three implications organise the review's practical content. First, preparedness dominates improvisation: the components of successful resolution — insolvency regimes that permit timely workout, legal frameworks for loan sales and securitisation, AMC governance templates, provisioning rules with calendar force — are institutional infrastructure best built before the crisis that requires them, since building them midcrisis costs years at the point they are most expensive. Second, recognition and recapitalisation are a package: jurisdictions should maintain credible recapitalisation frameworks — resolution funds, bail-in regimes, and lawful public backstops — precisely so that supervisors can compel recognition without triggering the contraction that makes forbearance tempting. Third, fiscal capacity is the binding constraint in emerging economies, where the advanced-economy playbook may be unaffordable; for these jurisdictions, the design of low-fiscal-cost instruments — securitisation with partial

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guarantees, regional AMC structures, staged calendar provisioning — is the operative frontier, and the literature offers them notably less guidance than it offers the advanced economies that generated most of its evidence.

7. CONCLUSION AND RESEARCH AGENDA

The NPL resolution literature has reached an unusual degree of consensus for macrofinancial economics: early transparent recognition, paired with credible recapitalisation and supported by functioning workout infrastructure, outperforms delay on essentially every horizon that matters, and the zombie-lending mechanism gives that conclusion firm microfoundations. The open questions are correspondingly specific rather than foundational. How should resolution be designed where fiscal space is absent — the situation of most emerging economies facing the next crisis? What determines AMC governance success, beyond the case-study level? How will the growth of non-bank credit change the locus and resolution of the next NPL cycle, when a large share of distressed exposures may sit outside the supervised banking perimeter? And what are the long-run allocative effects of the COVID moratoria now visible in firm-level data? Each question is tractable with data now emerging, and each bears directly on whether the hard-won lessons of past crises are usable by the economies most likely to need them.

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